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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/433,062	11/03/1999	Thomas A. Skupien	MEMS-038	2000

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EXAMINER *MC*

ROY, SIKHA

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 04/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/433,062

Applicant(s)

SKUPIEN, THOMAS A.

Examiner

Sikha Roy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2002.
- 2a) ☐ This action is **FINAL** 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

The Amendment (Paper #9), filed on January 23 2002, has been entered and is acknowledged by the Examiner.

Cancellation of claims 1-6 and new claims 7-12 have been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7,8,10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent 5,394,054 to Chen et al. in view of U. S. Patent 5,990,610 to Matsumoto et al.

Regarding claims 7,8,10 and 12 Chen et al. disclose (column 4 lines 48-67, column 2 lines 15-34, Fig. 4) a cathode ray tube 78 including a neck portion and a funnel portion, comprising of a plurality of conductive stem pins 36 at the end of the electron beam and plurality of electrodes (grids G3, G4 and G5) for focusing electron beam 73. The second accelerator electrode (G3 grid 68), a cylindrical element smaller in diameter than the neck is connected to anode potential V_A . The focus electrode (G4 grid 70) is coupled to and charged by a focus voltage V_F , where $V_F < V_A$. The final accelerator electrode (G5 grid 72) comprising a conductive coating 46 disposed on the

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inner surface of the neck and funnel of the glass envelope is connected to high anode voltage V_A via the anode button 44 in the neck.

Chen et al. disclose the claimed invention except for focus electrode connected to low voltage stem pin and accelerator electrode connected to an isolated stem pin. It is well known in the art as is evidenced by Matsumoto et al. (column 8 lines 42-45 Fig. 5A) that the plurality of stem pins include a high voltage stem pin 3B and rest the lower voltage stem pins 3A, 3C. It would have been obvious to one having ordinary skill in the art at the time of invention to connect the accelerating electrode to high voltage V_A through the isolated high voltage stem pin and focusing electrode to focus voltage V_F through the low voltage stem pin.

Claims 9, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent 5,394,054 to Chen et al. in view of U. S. Patent 5,990,610 to Matsumoto et al. and further in view of U. S. Patent 5,077,498 to Odenthal.

Odenthal in analogous art of cathode ray tube with Einzel focus lens disclose (column 2 lines 40,41, column 3 lines 51,52, column 5 lines 18,19) the high voltage potential equal to 12 kilovolts. It is noted that this high voltage potentials applied to the accelerating electrode through the anode button focuses the electron beam toward the target surface.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to specify the anode potential of the CRT of Chen et al. equal to 12 kilovolts as suggested by Odenthal for focusing the electron beam toward the target.

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Referring to claim 12 Chen et al. and Matsumoto disclose all the claimed limitations except the second and the accelerator electrode connected to anode potential equal to 12 kilovolts. Odenthal discloses the second electrode and the accelerating electrodes connected to 12 kilovolts through anode button for focusing the electron beam with reduced spherical aberration. It would have been obvious to include the anode potential of 12 kilovolts as disclosed by Odenthal for focusing the electron beam toward the target.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U. S. patent 5,196,764 to Kim et al. discloses cathode ray tube having symmetrical anode potential.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (703) 308-2826. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (703) 305-4794. The fax phone

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

S.R.

Sikha Roy
Patent Examiner
Art Unit 2879



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